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| NWS FORM E-5 <small>(11-88)</small> <small>(PRES. by NWS Instruction 10-924)</small> | U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE | HYDROLOGIC SERVICE AREA (HSA) WFO Jackson, Mississippi |
| MONTHLY REPORT OF HYDROLOGIC CONDITIONS | | REPORT FOR: MONTH YEAR January 2014 |
| TO: Hydrometeorological Information Center, W/OH2 NOAA / National Weather Service 1325 East West Highway, Room 7230 Silver Spring, MD 20910-3283 | | SIGNATURE Alan E. Gerard, Meteorologist In-Charge <hr/> DATE 2/18/2014 |

When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924)

X An X inside this box indicates that no river flooding occurred within this hydrologic service area.

Synopsis...

January 2014 was a very cold, very dry month across the Jackson Hydrologic Service Area (HSA). It ranked in the top 10 coldest Januaries for every ASOS location in the HSA. Every climate site observed an average monthly temperature of at least 4.0 degrees below normal. The coldest location was Meridian which had its 3rd coldest January with an average monthly temperature of 38 degrees, which is 6.8 degrees below normal. Every ASOS location also fell within their top 10 driest Januaries, with all sites observing more than 2.5 inches below normal rainfall. Greenville was the driest with only 0.84 inches of rain. This qualifies for its 2nd driest January, 4.13 inches below normal rainfall.

The large scheme weather pattern in January consisted of a large amplitude wave over the eastern half of the CONUS, allowing for continuous sweeping frontal boundaries. The month/new year began very quietly on the 1st. On the 2nd however, the first of many cold fronts passed through the South. This brought rain to the majority of the HSA except the very far western parishes/counties. Cold temps briefly filtered in behind the front before winds rotated to a southerly direction again and temps began to warm. A powerful cold front swept through very quickly on the 6th though and brought an arctic outbreak to a large part of the United States, including the Deep South. Rain fell ahead of the boundary, with most locations receiving only a quarter of an inch or less. An arctic high kept temps very cold for the next few days.

Another, less potent, cold front crossed the HSA on the 11th. Less potent only in the way of freezing temperatures; It did however bring more rainfall, up to 1.5 inches in isolated spots. Then, in quick succession, another front passed through late on the 13th and another on the morning of the 15th. Both systems brought just a bit of rainfall, amounting to 0.50-0.75 inches total in any one location. Another front passed through the HSA on the 17th. This time it only brought cold temps and no rainfall due to a lack of recovery of atmospheric moisture. One more front passed through the region on the 19th and with enough lift and just enough moisture, the atmosphere was able to form and drop a little bit of rainfall in the Southeast HSA.

The following week was another week of continuous cold fronts. One passed through on the 21st, and another on the 23rd. Both were dry fronts with cold temps associated with them. On the 24th, a weak upper disturbance increased moisture across the area and provided a good set up for wintry precipitation. Parishes and counties south of I-20 and west of I-55 received sleet and snow. The very southwestern tip of the HSA received the most with Jonesville recording 2.5 inches of snow. Other locations were as such: Natchez, MS- 1.5 inches, Clayton, LA-0.8 inches, Brookhaven, MS-0.5 inches, Winnsboro, LA-0.3 inches, and Jackson Airport-Trace.

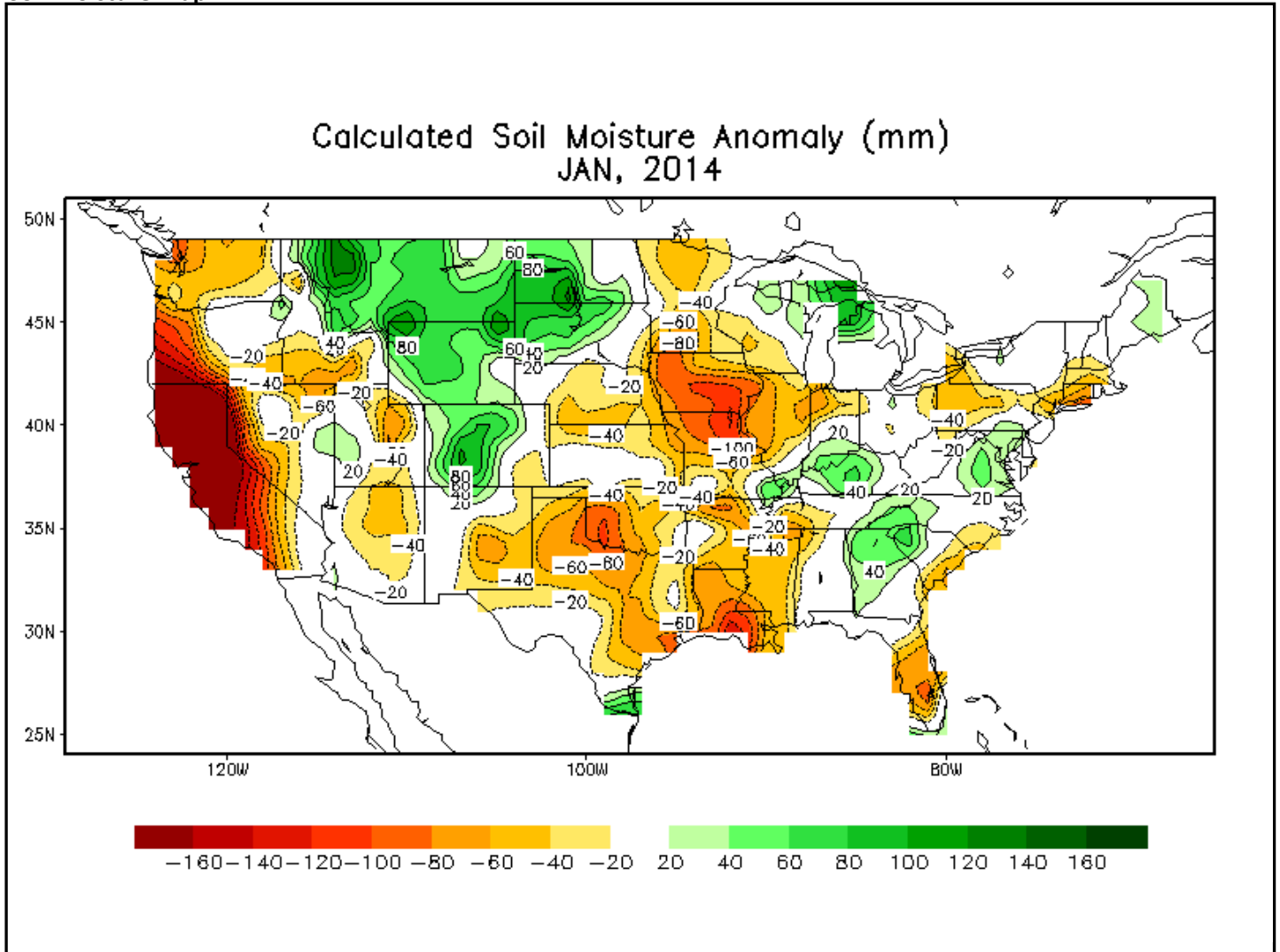
The next few days were relatively quiet and allowed the snow to melt and the atmosphere to recover. Another strong arctic front passed through on evening of the 27th and on the 28th, as an upper level low over northern Mexico pushed towards the Deep South. With temperatures in the low to mid 20s, wintry precipitation fell again. Central Mississippi and

Northeast Louisiana experienced mostly snow. Areas south of a line from Natchez to Meridian experienced mostly sleet ending with just a little bit of snow. Area totals were as such: Puckett, MS-4 inches, Jonesville, LA- 4 inches, Hazlehurst, MS-3 inches, D'Lo, MS-2.5 inches, Seminary, MS-1.5 inches of sleet and 1 inch of snow, Ferriday, LA-2.2 inches, Meridian, MS-2 inches, Brandon, MS-1 inch, Hattiesburg, MS-1 inch of sleet, and Jackson Airport-0.8 inches.

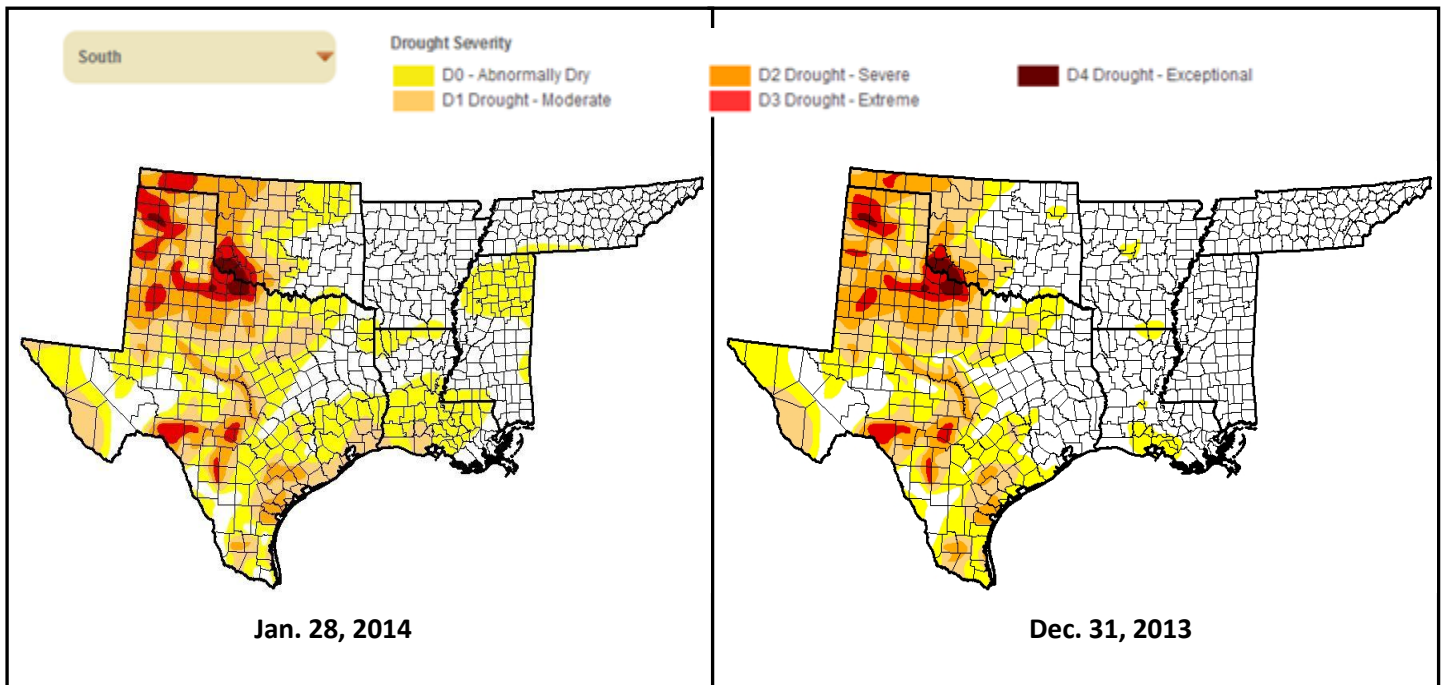
The remaining days of the month were quiet and warming.

River and Soil Conditions...

Soil Moisture Map:



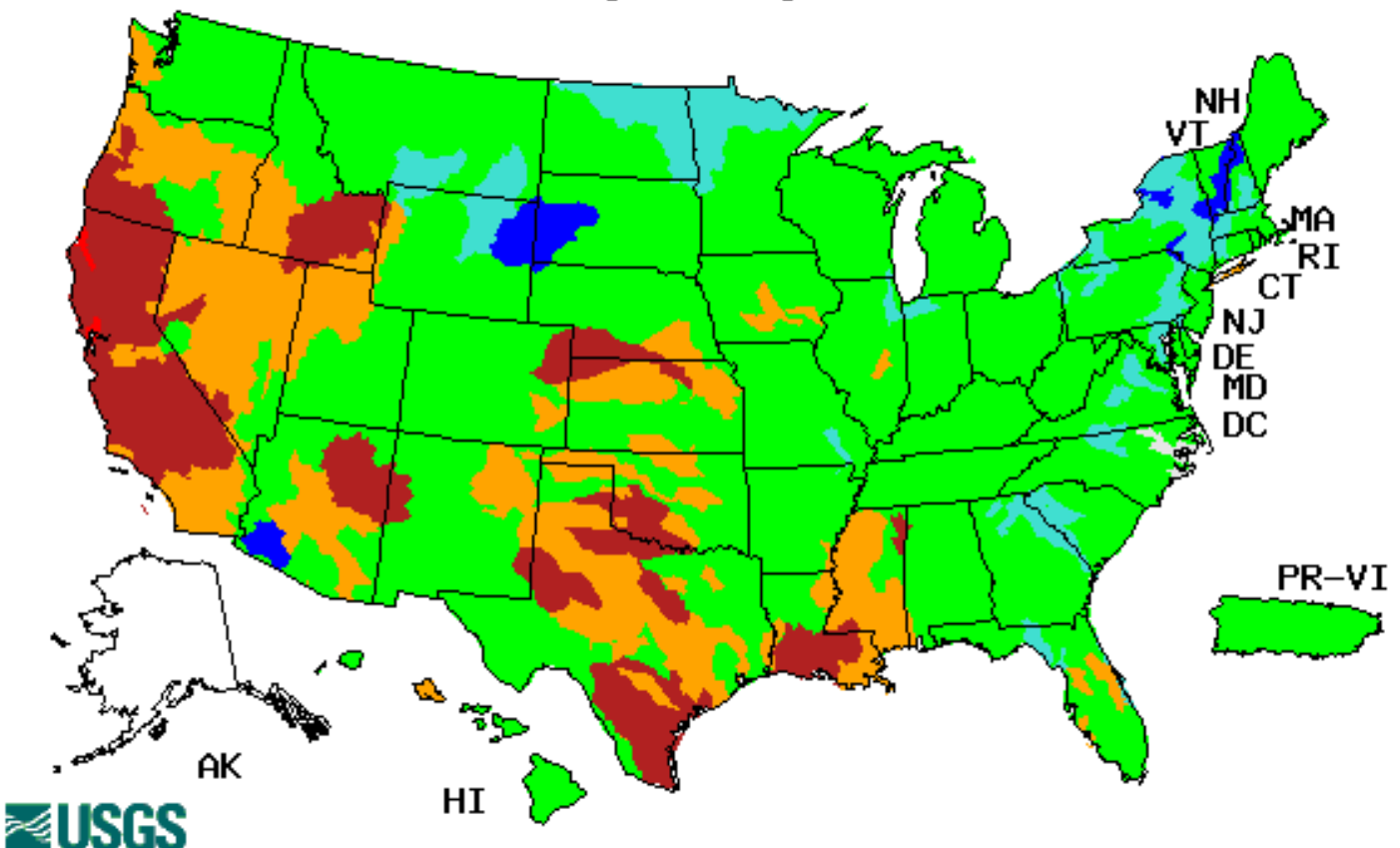
Drought Comparison:



Streamflow:

The United States Geological Survey's (USGS) January 2014 river streamflow records were compared with all historical January streamflow records. Streamflow was below normal for the majority of the Jackson HSA in Mississippi, Louisiana, and Arkansas.

Saturday, February 01, 2014



River Conditions:

No flooding occurred during the month of January in the Jackson HSA. The Mississippi River from Arkansas City to Natchez held above normal stages, however, for the majority of the month until it dropped significantly at all points in the last days of January.

Climatic Outlook and Flood Potential:

The climatic outlook favors above normal temperatures over the next 3 month for the entire HSA. As for precipitation, the outlook shows below normal chances of rainfall south of I-20 and then an equal chance for above, below, or normal precipitation over the areas north of I-20 within the HSA. Based on current soil moisture, streamflow, and the 3-month weather outlook, the flood potentials are as follows:

Pearl River System: Average.

Yazoo River System: Average.

Big Black River System: Average.

Homochitto River System: Average.

Pascagoula River System: Average.

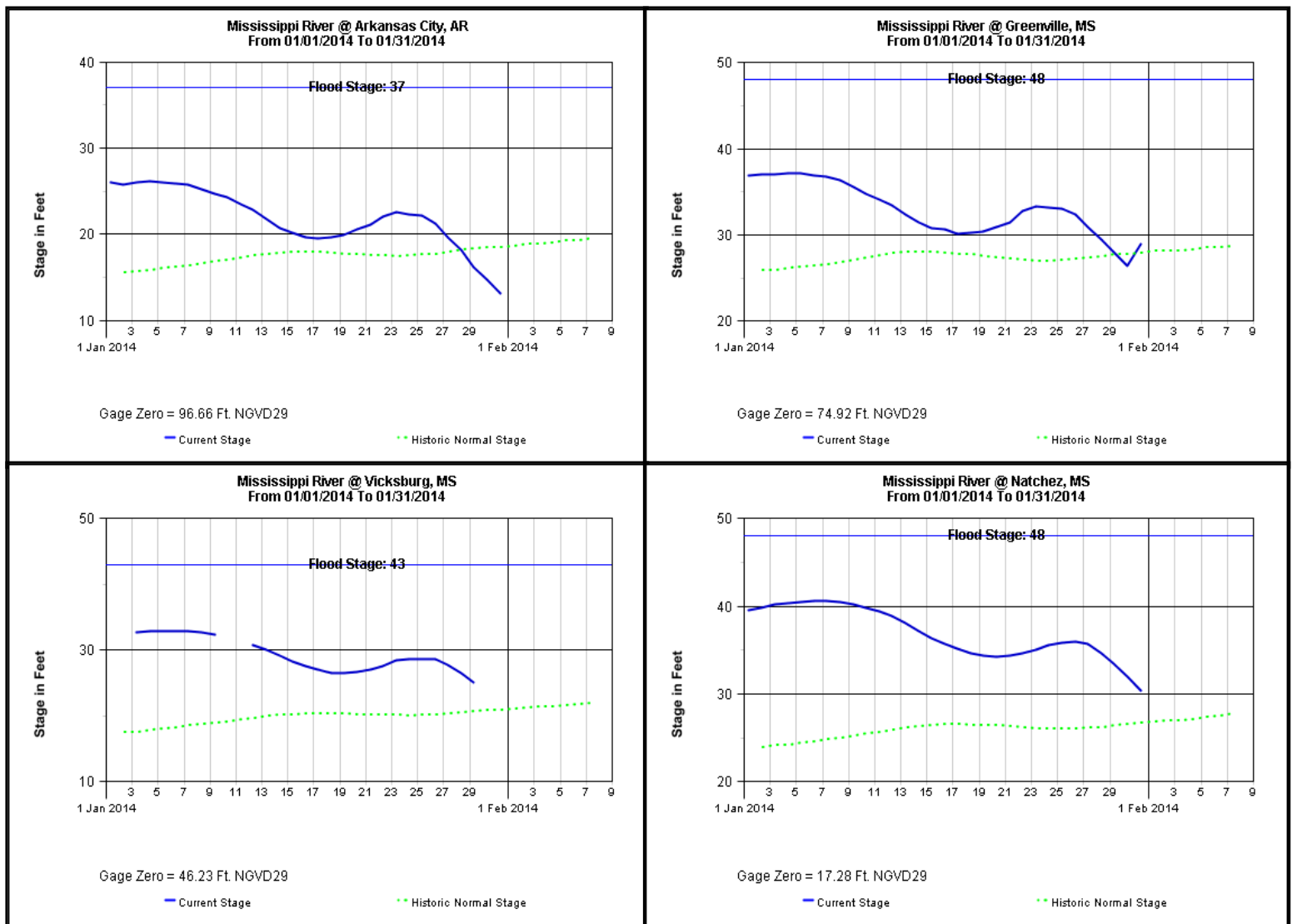
Northeast LA and Southeast AR: Average.

Tombigbee River System: Average.

Mississippi River: Average.

Mississippi River Plots January 2014

Plots courtesy of the United States Army Corps of Engineers



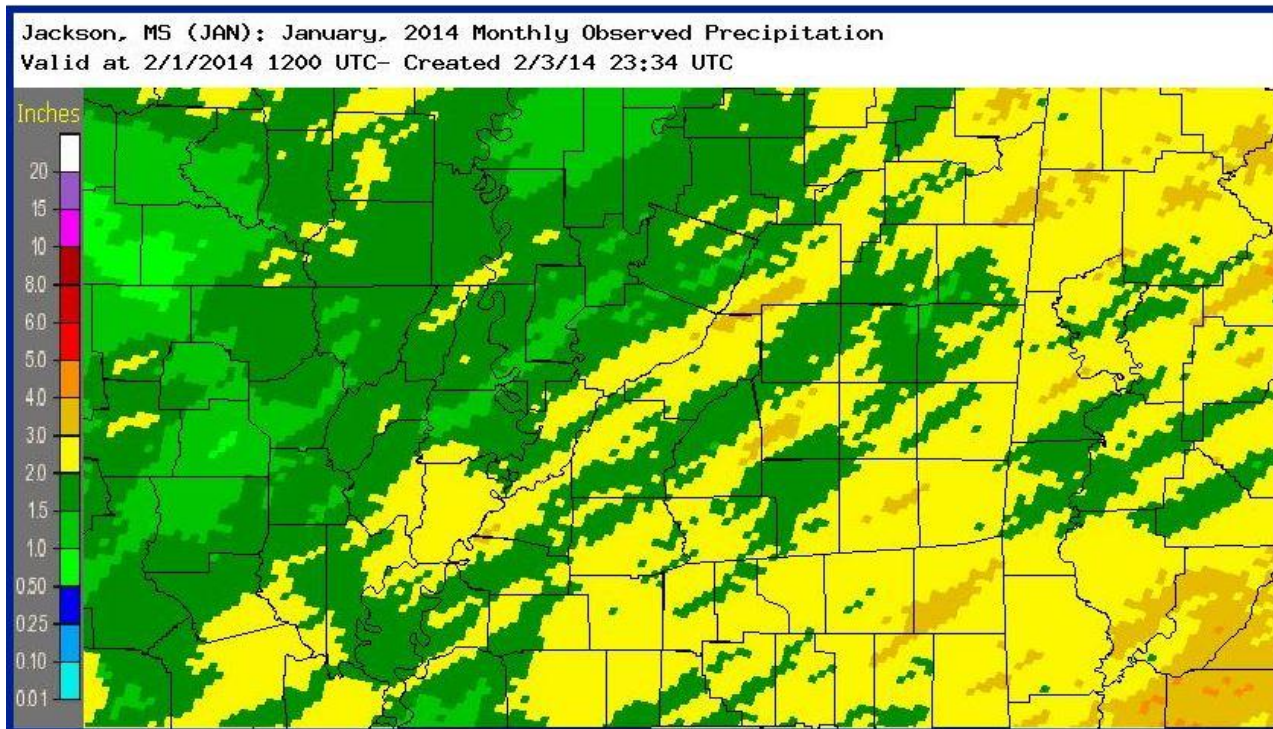
Monthly Preliminary High and Low Stages:

| Location | Flood Stage (ft) | High Stage (ft) | Date | Low Stage (ft) | Date |
|---------------|------------------|-----------------|-------------|----------------|------|
| Arkansas City | 37 | 26.14 | 1/04 | 13.09 | 1/31 |
| Greenville | 48 | 37.23 | 1/04 | 26.35 | 1/30 |
| Vicksburg | 43 | 32.98 | 1/05 & 1/07 | 21.56 | 1/31 |
| Natchez | 48 | 40.67 | 1/07 | 30.37 | 1/31 |

Rainfall for the Month of January

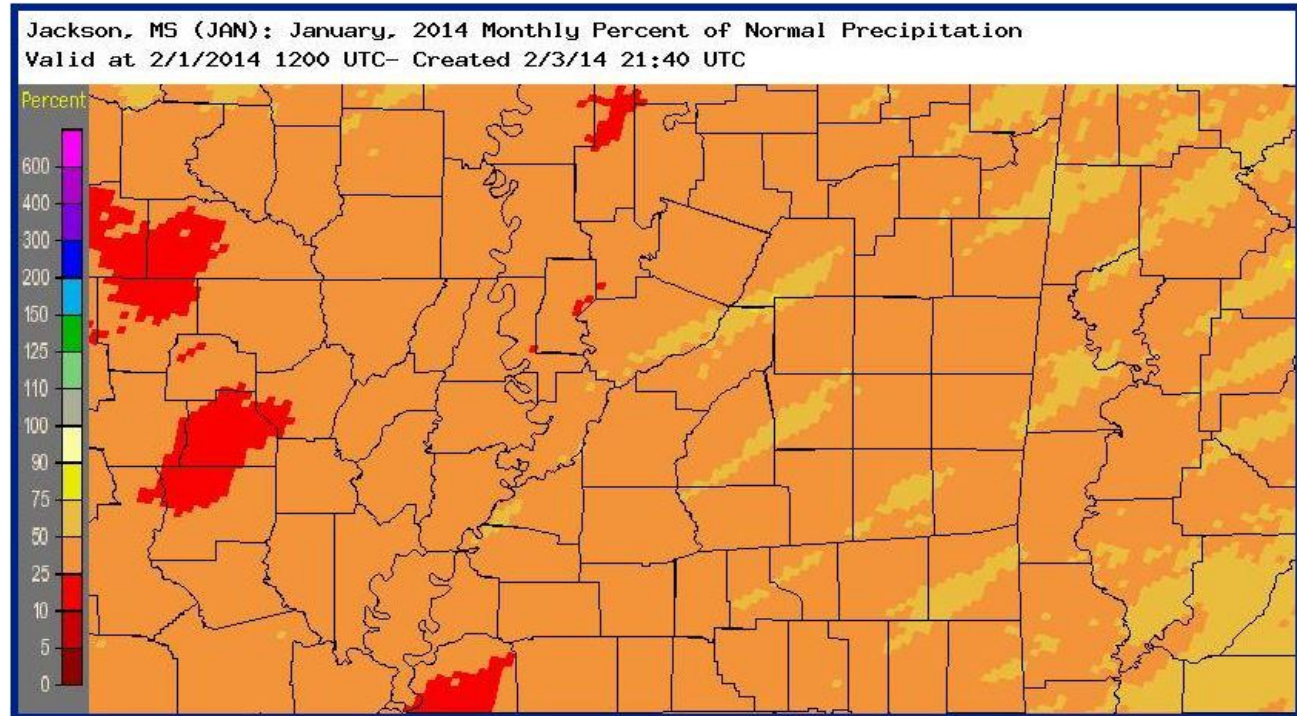
The largest rainfall amounts in the HSA from NWS Cooperative Observer reports during the period from 7 am on December 31st until 7 am on January 31st were: 2.68 inches at Philadelphia, MS; 2.63 inches at Laurel, MS; 2.61 inches at Vicksburg, MS; 2.49 inches at Vaiden, MS; 2.45 inches at Columbia, MS; 2.44 inches at Crawford, MS; and 2.39 inches at Pat Harrison Waterway's Big Creek Water Park, MS.

January Rainfall Estimates:



Note: Observer rainfall and MPE may differ due to time differences.

Percent of Normal Precipitation:



Note: Observer rainfall and MPE may differ due to time differences.

January Rainfall for Selected Cities:

| City (Airport) | Rainfall | Departure from Normal | 2014 Rainfall | 2014 Departure from Normal |
|--------------------|----------|-----------------------|---------------|----------------------------|
| Jackson (KJAN) | 1.61 | -3.36 | 1.61 | -3.36 |
| Meridian (KMEI) | 2.47 | -2.66 | 2.47 | -2.66 |
| Greenville (KGLH) | 0.84 | -4.13 | 0.84 | -4.13 |
| Greenwood (KGWO) | 1.57 | -2.95 | 1.57 | -2.95 |
| Hattiesburg (KHBG) | 2.67 | -3.07 | 2.67 | -3.07 |
| Vicksburg (KTVR) | 2.26 | -2.81 | 2.26 | -2.81 |

Total Flood Warning products issued: 0
Total Flood Statement products issued: 0
Total Flood Advisories MS River: 0
Daily Climate and Ag WX Products (AGO'S) issued: 31
Daily CoCoRaHS Rainfall Products (LCO'S) issued: 31
Daily River and Lake Summary Products (RVD'S) issued: 31

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Note: Provisional stage and precipitation data were furnished with the cooperation of the Mississippi, Louisiana, and Arkansas National Weather Service Cooperative Observer Programs, United States Geological Survey (USGS), United States Army Corps of Engineers (USACE), Pearl River Valley Water Supply District (PRVWSD), Pat Harrison Waterway District, Pearl River Basin Development District, and the Mississippi Department of Environmental Quality.

cc: USGS Little Rock District
 USGS Ruston District
 USACE Mobile District
 USACE Vicksburg District
 USACE Mississippi Valley Division
 USGS Mississippi District
 SRH Climate, Weather and Water Division
 Lower Mississippi River Forecast Center
 Pearl River Valley Water Supply District
 Hydrologic Information Center
 Southern Region Climate Center
 Pat Harrison Waterway District
 Pearl River Basin Development District